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## SOCIAL WORK AT THE KRUPP FOUNDRIES, ESSEN, A. R., GERMANY.

Philanthropic efforts to improve the condition of the laboring classes are so numerous and so well known to American students of sociology that further discussion of similar movements may seem at first glance unnecessary. When these movements are more closely examined, the results are usually found to be very unsatisfactory and of little scientific value, for two reasons: either they affect the interests of too small a number of workmen, or else they are spasmodic and short-lived. The erection of workingmen's dwellings, schemes for profit-sharing in one or another of a hundred forms, efforts to furnish educational advantages and opportunities for amusement, have been part and parcel of many a large American firm's routine work in the past two decades. Rather fewer in number have been such experiments in Europe; but whether in America or Europe, the elements and conditions for tracing a single experiment through a series of years are usually wanting, despite abundant material in labor reports and elsewhere. As an example of this, let us take the history of profit-sharing. If we examine the reported cases of profit sharing and retain a fixed definition of profit-sharing throughout the inquiry, we find only a small number of cases in which real profit-sharing exists. The remaining cases fall in one or the other of the following four categories: (1) where a definite percentage of the net profits is not divided; (2) where the amount to be divided is a fixed sum determined before the net earnings are known; (3) where the amount received is by agreement to be devoted to a definite object, such as the founding of a library for the use of the factory's employés; (4) where the employés simply receive extra pay while acting in the capacity of agents for the firm's goods. In all of the four

classes, pure profit-sharing does not exist. The reports of the cases of actual profit-sharing are, moreover, so incomplete and fragmentary that the greatest variety of conclusions can be drawn from them. The records of co-operative stores and of single attempts on the part of individual firms to add to the contentment and welfare of their workmen are not more satisfactory. The difficulties are resolved into the two classes already mentioned; either the number of persons affected is too small, or the period of time is too short to form reliable conclusions. New material, therefore, will be useful, especially if it is less open to the foregoing criticisms. Such is the case with some very interesting experiments made by the firm of Friedrich Krupp, in connection with their world-famed cast steel works in Essen, on the Ruhr River. Essen lies very close to the western boundary of Germany, about fifteen miles from the Rhine and about thirty-five miles north of Cologne. The town itself is quite old, but its activity centres in and around the Krupp foundries. In 1890 the population of Essen was nearly 79,000, and this number included 16,000 of Krupp's workmen (with their families, numbering over 50,000). In addition to this, a large number of the factory hands live in the workmen's colonies in the suburbs of Essen, and are not reckoned with the population of the city, while about 3000 Krupp employés are located at various branch works. The total number of men employed by the Krupps and affected by their social experiments was, according to the census taken in this year, 25,200; and with their families amounted to 87,900 persons. This number was much smaller when the first experiments were begun, but we have here an opportunity to examine a series of experiments covering a period of a quarter of a century, and directly affecting a number of employés rising from 8000 to 25,000, and a number of persons varying from 30,000 to over 85,000. So huge an undertaking on the part of the greatest industrial establishment in Germany, and one of the greatest in the world, is deserving of more than passing attention.

The results of these social experiments are not to be obtained from observation only, for careful records to the most minute details have been kept. Within recent years the oversight and organization of this work have occupied the entire time of a skilled director, who makes constant reports to the firm. These records have been partly published. In 1883 Mr. Krupp issued, for the use of the officers of the works and for distribution among his personal friends, a little book giving a sketch of the origin and progress of the movement for improving the condition of the workmen employed at the works, and containing in full the rules and regulations of the various associations. It was intended mainly as a convenient manual of the rules affecting the employés and for the use of the officials of the works, and was not, therefore, given to the public. Toward the close of last year a second enlarged and illustrated edition of the book was issued. This edition contains full information respecting the social work down to 1890, together with much interesting statistical material. Although this edition was also issued for private circulation only, the firm does not object to furnishing this material, so far as possible, for scientific purposes, but maintains that a wider circulation of their descriptive volume is inexpedient, owing to labor disturbances and discontent throughout Germany.\*

Before discussing the work proper, another introductory word is necessary on the growth of the Krupp cast steel works and the motives of the firm in their social work. The works were started in a very humble way in 1810, and thirty-eight years afterwards employed only seventy-two men. It was not until in the fifties that cast steel attained such universal use that the factory required much enlargement. In the fifty years, 1841-'90, the number of persons employed by the Krupps rose nearly 2000 per cent., and the

\* The writer wishes to acknowledge his indebtedness to Professor Fitting, of the Law Faculty, University of Halle, and especially to Director Fitting and Dr. Pieper, at the Krupp works in Essen, for much assistance and many courtesies in enabling him to personally inspect this work and in furnishing material for a closer study of it.

population of Essen increased in the same period about 1200 per cent.; but the number of dwelling-houses in the town of Essen increased only 600 per cent.\* It is, of course, to be taken into consideration that the houses have increased in size, and that this figure does not, therefore, represent accurately the increase in dwellings. The proportion of Krupp employes living without the city limits has also, in recent years, rapidly increased. The motives that induced the Krupps to undertake the experiments described below were twofold: the business interests of the firm and philanthropic considerations.

The rapid increase of population in the city of Essen worked to the injury of the laboring classes in three ways: first, the dwelling capacity was overtaxed, and high rents, sickness, and disease followed this overcrowding; secondly, the number of petty shops dealing in the necessities of life increased, and furnished bad goods at exorbitant prices; thirdly, discontent and socialistic ideas spread among the laborers, and the standard of the workmen that could be retained for long periods of time gradually lowered. These tendencies were quite apparent in the years 1861-'62, when the Krupps first began to build workingmen's dwellings.†

\* The rapid increase in the number of men employed can be seen from the following table (figures given only in round numbers):

1832..... 10	1858..... 1,040	1871..... 8,810	1888.....13,100
1844.....100	1860..... 1,760	1872.....10,390	1889.....14,200
1848..... 72	1861..... 2,660	1874.....11,543	1890.....15,500
1849.....100	1863..... 4,180	1875..... 9,700	1891.....16,000
1850.....230	1864..... 6,690	1882.....11,000	
1855.....700	1865..... 8,180	1887.....12,600	

These figures include only the men employed at Essen. The total number employed by the Krupps, including the branch works, averages 50 per cent. higher. Thus the total number in 1888 was 21,000, and in 1891 it amounted to 24,000, and is now 25,200.

† The following table shows the average number of persons to each house in Essen at different periods:

1820.....6.39	1855.....11.66	1867.....14.60	1885.....15.14
1830.....6.80	1858.....13.11	1871.....15.50	1890.....16.22
1840.....7.53	1861.....12.71	1875.....12.75	
1849.....9.28	1864.....15.30	1880.....13.06	

In the workmen's quarter of the city the conditions were extremely unfavorable. The number of persons in each house in 1864 was as high as 23.89. Rents in the middle of the fifties for a two-room dwelling ranged from \$18.00 to \$22.50 per year, and gradually rose to a point fifty per cent. higher. The death rate in that quarter of the city was 5.55 per cent. for a long period, whereas it was only 3.41 per cent. for the entire city. Suffice it here to say that, with respect to the per capita house rate, the Krupp building schemes have kept the same at almost the point that it was in 1864, in spite of the great increase in population and in the size of houses in the later periods.

Taking into consideration the fact that, during the period prior 1850-1870, the workingmen's houses were for the most part small, with an average of twenty-three persons to each house, and a death rate of over 5.55 per cent. of the population, we can readily imagine the sanitary and moral conditions there existing. A still further call for relief made itself felt in the results of a cholera epidemic in 1866, which played havoc and wrought great distress among the laboring classes. Another important factor in suggesting to the firm the need of action on their part remains to be considered; this was the general rise in the prices of the necessities of life, which was largely due to an increase in the number of small shops doing a small business. These small stores furnished poor goods at high prices, and to draw trade offered prizes in the form of a present of whisky proportionate to the amount of goods purchased. Many of them were in private dwellings carrying on traffic without license, and doing a credit business with corresponding extortions. These shops have not been entirely superseded by the establishment of the Krupp stores, for the prize and credit features, and the fact that the stores are conveniently located in streets through which the workmen must pass daily, offer strong attractions. The foregoing conditions, as a whole, were the causes that bred discontent among the working classes in Essen, and led to revolutionary and

socialistic meetings and outbreaks, and finally to a great strike in 1872 that lasted six weeks. An understanding of these conditions gave definiteness and increasing incentive to action on the part of the firm. It has followed mainly two lines. One consisted in the erection of good and healthful dwellings, of which the firm has already over 3700, and in the establishment by the firm of large stores to free the workmen from the usurious exactions of the petty shops. Closely related to these two movements have grown up a number of minor schemes and efforts for the social, moral, and intellectual improvement of the employés.

With this general survey, we can now consider the different single efforts made at Essen under two general heads: (*A*) Those for the improvement of the material conditions of the laborers; (*B*) those for educational purposes. Under the first group we shall discuss:

1. The building and renting of workmen's dwellings.
2. The firm's co-operative stores, and boarding accommodations for unmarried workmen.
3. The treatment and prevention of sickness and disease.
4. Insurance against accident and sickness; pension funds; savings banks, etc.

For the purposes of this paper, the second general group interests little, and will occupy less of our space. It includes a discussion of:

1. The common and industrial schools.
2. The education of apprentices and the training of young girls in housekeeping.
3. Humanitarian rules in factory work; assistance in maintaining religious teaching and in charity work.

#### (*A*) EFFORTS TO IMPROVE THE MATERIAL CONDITION OF THE LABORERS.

Our purpose being descriptive and historical, a statement and summary of additional facts will often occupy space which could much more entertainingly be devoted to a discussion of the relative importance and underlying principles of those already given.

1. *The Building and Renting of Workingmen's Dwellings.*  
—The first start in this direction was made in 1861-'62. Two rows of houses, one with six dwellings and the other with four, were built for the foremen of the factory. The outer walls were of heavy stone and plastered work, and the inner walls separating the dwellings consisted of heavy wooden frame-work filled in with broken stone, and then plastered over (*Steinfachwerk*). Each dwelling contains three rooms on the first story, three attic rooms, and a cellar under half the building. The first story is nine feet four inches in height, and the attic story eight feet four inches. The four rooms of the dwellings, not including two bedrooms, have a total floor space of 528 square feet. Up to the present time these dwellings have been reserved for foremen of the works.

In the summer months of 1863, the first colony of workmen's dwellings known as *Alt-Westend* was built. It contained eight rows of houses two stories high, each row having sixteen dwellings of three or four rooms each, and so arranged that the four-room dwellings could be divided into two-room dwellings, and so rented if necessary. The first stories have a clear height of over nine feet and the second of over eight; the outer walls are of plastered stone work in the first story, surmounted by plastered frame-work, and each dwelling has a cellar. The total floor space of the rooms in each dwelling, exclusive of bedrooms, did not average quite as much as in the case already mentioned. The buildings are simple, and in the words of Mr. Alfred Krupp, were intended for poor families who must save, but desire a healthful dwelling, and not for those to whom a few more dollars a year made no difference, when it meant that they could live more comfortably.

A second colony, called *Neu-Westend*, was completed in the winter of 1871-'72, and was constructed on a somewhat different plan. Here are to be found ten double houses three stories high, each containing two two-room dwellings on each floor, that is six dwellings to each house and sixty



dwellings in all. In addition to these, there are eight double houses, three stories high, with two three-room dwellings to a floor. Thus, these houses have also six dwellings to a house, and forty-eight in all, with a grand total of 108 two and three-room dwellings for the colony. The outer walls of the buildings in this colony are of brick. The great need of dwellings on the part of the poorest classes of the workmen, which made itself felt before the completion of this colony, required the erection of another colony called Nordhof, on the so-called "Baracken" system; that is, frame houses built in solid rows. In little less than seven months, this colony with 162 dwellings, containing from two to four rooms each, was completed. Of these 162 dwellings, 126 were constructed on the "Baracken" plan. They are plain frame houses built in rows, two stories high, with one room on each floor, but with a separate entrance from the street for each house. All sanitary arrangements, closets, etc., are outside of the house. The work progressed so rapidly that the remaining thirty-six dwellings of three and four rooms each belonging to this colony could be more solidly built of brick and three stories in height.

The colonies built in the years 1871-'73 need only be mentioned here: one contains 154 dwellings of from three to five rooms each; the other with eighty-two houses, contains 492 dwellings of from two to four rooms each. Both of these colonies comprise buildings of stone and plastered work. An addition of seventy Baracken buildings, with four dwellings of two rooms each, has been made to the last mentioned. This makes a total of 280 two-room dwellings for the colony. These Baracken dwellings are now rented for almost nothing, or given rent free to widows and relatives of former workmen.

The largest colony of all is known as Cronenberg, and is deserving of closer attention. It was built in the years 1872-'74, but since then has been enlarged several times. It is situated not more than one hundred steps from the west boundary of the works. According to the census of March, 1892, 8001

persons lived within the limits of this colony, which covers over fifty acres of land. On eight streets running the length of the colony, and ten cross streets ranging in width between curbs from twenty-seven to forty-one feet, and with sidewalks eight feet in width, are situated 226 three-story houses built with walls partly of rough brick and partly of rough stone. Some are in rows and some in pairs. Here are located dwellings for several officials and school teachers connected with the works. A parsonage, two school buildings, a Protestant church, several branches of the co-operative store, an apothecary shop, a post-office, and a market-place one-third of an acre in size, a restaurant with games, bowling alley, etc., and a library with a large hall for workmen's meetings, have been erected by the firm within the limits of Cronenberg. To return to the dwellings, there are within this colony nearly 1600, varying from two to five rooms each. Each house has a cellar and garden, and a share in a common place for drying clothes.

There remain two groups of buildings to be mentioned here. One is the fire engine house, which is a long building two stories high, with room for the service, and in addition eight dwellings of three and four rooms each for married firemen, seven rooms used in connection with the fire service, two family dwellings of five rooms each for the watchmen and coachmen, three offices, two working rooms and a wash house. The second group consists of dwellings for the officials of the factory. Two of these were built as far back as 1863, but the others are for the most part of recent date. These dwellings are large commodious houses, architecturally pretty and very comfortable. They number in all fourteen buildings; four of them contain each one family, while the others accommodate forty-four families.

Besides those mentioned, there are a large number of buildings erected by the Krupps, such as dwellings for officials, stores, bath houses, schools, etc. The comparatively large number of two and three room dwellings can be criticised and compared with American conditions only after

due allowance for German customs and habits of life. The average number of rooms to a dwelling throughout Germany for all classes is not nearly so high as the American average.

The relative merits of different systems and plans for building have often been discussed and carefully studied by the Krupp firm. From the beginning, the firm would willingly have adopted the so-called cottage system, by which small houses could be built alone, or even in pairs, had it been possible. The building scheme was never intended as a charity, but to be carried out on strict business principles, the firm renting the houses so that they would pay for the cost of administration, and a low interest on the capital invested. The high price of land made it necessary to build houses close together in order to bring the rents within the means of the workmen. The firm's strict sanitary regulations, which are not merely on paper, but are rigidly enforced, make the ensuing conditions less objectionable than might be supposed. The fundamental principle followed was that all the dwellings should have a good location, with ample means of access for light and air, and good water supply, and should be so arranged that in spite of the fact that the dwellings are close together, each single dwelling shall be as much cut off as possible from the neighboring ones. Each house contains a number of dwellings, but it stands alone; the streets are wide, and considerable ground separates one house from another. All the 3000 dwellings are within fifteen minutes' walk from the works. The dwellings are, with but few exceptions, rented only to employés of the works. Those longest in the firm's employ and, among these, those with the greatest number of children, receive any favors in the selection of dwellings. Policemen and teachers in the town are also eligible to become tenants of the firm. A rather strict and elaborate lease must be signed, and all tenants agree to obey a code of house regulations which, among other things, forbids the carrying on of any business in the dwelling, sub-letting, quarrels with neighbors and disorderly noises, building alterations or additions, filthiness

in the emptying of refuse, the mis-use of drains, the keeping of animals that annoy other members of the house, smoking pipes without covers and lighting fires with petroleum. The leases require all tenants to make good any damage done to the house, the tenant of the first floor to clean the street in front of the house to the middle of the same, every day, before nine a. m., except on Sundays and holidays, when it must be done on the preceding afternoon between three and four o'clock. Gardens, stairways and windows must be kept clean ; all drains are to be kept clear, and the walls and ceilings of every dwelling must be whitewashed, painted or papered at the cost of the tenant. All ordinary repairs must be made by the tenant at his own cost. The kitchen, according to contract can be furnished, if desired, with water at small charges, varying with size of dwelling. The leases for officials' dwellings are a little less strict, and make additional provisions for gas or electricity to be furnished from the works at the tenant's request. Formerly leases expired upon fourteen days' notice from either party to the contract, but now, in most cases, the three months' notice which is customary throughout Germany is required. The rents are paid, however, every two weeks and are deducted from the tenant's wages. The rents of the workmen's dwellings range at present in price as follows :

For "Baracken" or frame dwellings of two rooms, per	
year, . . . . .	\$15.00 to \$18.00
For other two-room dwellings with cellar, per year, .	18.00 to 27.00
For three-room dwellings with cellar, per year, . . .	30.00 to 40.50
For four " " " " " " . . .	45.00 to 50.00
For five or six-room dwellings with cellar, per year, .	52.50 to 82.50

The financial status of the building experiment can be seen from the firm's books for the year July, 1890, to July, 1891.

In Essen there were July 1, 1891, 3659 dwellings (not including forty-three dwellings given to widows rent free), which stood as follows :

## DR.

Capital actually laid out in buildings, . . .	\$2,760,612	
Capital " " " " ground, . . .	303,406	
	<hr/>	\$3,064,018

## CR.

Total income from rents for the year,	\$121,168	
Repairs to property, . . . . .	\$28,169	
Public lighting, water, roads, gardens,		
etc., . . . . .	16,912	
Fire insurance and taxes, . . . . .	12,000	
	<hr/>	57,081
	<hr/>	\$64,087

This shows a net income of 2.1 per cent. on outstanding capital without deducting anything for wear and tear on buildings. Outside of Essen the firm has 523 dwellings (with 131 rent free not included), which stand as follows :

## DR.

Capital laid out in buildings, . . . . .	\$385,425	
Capital " " " ground, . . . . .	50,158	
	<hr/>	\$435,583

## CR.

Rents in full for the year, . . . . .	\$16,761	
Repairs, . . . . .	\$2,797	
Lighting, water, gardens, roads, . . . .	756	
Taxes and insurance, . . . . .	1,976	
	<hr/>	5,529
	<hr/>	\$11,232

This shows, without deductions for wear and tear on buildings, a net income of 2.5 per cent. on the capital invested. In reality the Krupps have spent these balances in other ways for the benefit of their men. The building account has, however, been kept separate in order to show that this work can be made to pay at least cost, though no real profit, for these sums of money could be readily loaned on good security for double this apparent income.

Another question that had to be promptly decided was whether the firm would part with their buildings to such workmen as might wish from time to time to buy their own homes. This was decided in the negative. As we shall see

in another place the firm has done what it could to encourage saving, and the disposition on the part of the men to earn homes of their own. It was, however, impossible to sell the firm's houses with a restriction upon further sale, and without such restrictions the houses that the firm had taken the pains to build might easily in the course of time get into the hands of speculators and the old evils return. Therefore, the firm has decided to retain possession and administer its own property as much in the interests of the men as possible. The increased demand for property in the neighborhood of the foundries has proven the wisdom of this policy.

The erection by the firm of school buildings, churches, dining halls, boarding houses for unmarried workmen, stores, a theatre, library, etc., will necessarily be touched upon in the respective sections under which the movements fall and therefore need not be mentioned here.

We are now ready to turn our attention to the experiments to decrease the cost of and improve the quality of the food and necessities of life purchased by the laborers in Essen.

2. *The Firm's Co-operative Stores and Boarding Accommodations for Unmarried Workmen.*—In 1868 there existed in Essen a small co-operative society, the majority of whose members were connected with the Krupp works. At the request of the officers of this society the firm undertook its management and changed its character to that of a "*Consum-Anstalt*," or a complete store on a large scale, whose object should be to furnish all varieties of first-class goods needed by the workmen at lowest possible prices. For many years the firm ran this *Consum-Anstalt* on its own account and at its own risk, grading prices so that the cost of administration would be covered without attempt at profit. An exact balance of accounts was, however, impossible and small profits were made, which were turned into other channels for the benefit of the employés. In order, however, to do away with all possibility of doubt in this direction, a plan of real co-operation has been adopted in recent years. All sales are made solely on a cash basis. No credit whatever

is given. Any person is at liberty to buy at the stores. Employés of the works are entitled to receive a book in which all purchases made are entered with prices of the same. Over 11,000 of these books are now outstanding. At the end of each business year (November 1) these books are handed in and the total profits of the business are then divided among the holders of the books in proportion to the value of purchases, and paid in the form of a cash rebate on or before December 15. This brings each family a little cash at a very desirable time of the year and has amounted to as much as five per cent. of the year's purchases. This plan enables the *Consum-Anstalt* to keep its prices near to those of its competitors without depriving the workmen of the fullest privileges possible. The general range of prices at the *Anstalt* averages a trifle below the range of ordinary market prices, but as a rule follows the same course.

So rapidly did the *Consum-Anstalt* grow that in 1890 it comprised not only the main store, a large modern building about 200 feet square, but also fifteen retail grocery stores located throughout the various settlements, nine branch stores for manufactured goods, one shoe factory and three branch shoe stores, one hardware store, one mill and bakery, with six bread stores, a slaughter-house, with seven retail meat stores; two clothing establishments, seven restaurants, one wine store and an ice company, one coffee house, a brush factory, a laundry and a weekly market for fresh vegetables brought in from the surrounding country. It should also be mentioned that there is a separate establishment to roast the coffee consumed, and that the machinery for this purpose browns over 2500 pounds a day. During the year 1890 fifty-two persons were engaged in connection with the slaughter-house, which slaughtered 1335 steers, 1343 calves, 4907 swine and 817 sheep. Among the employés of the *Consum-Anstalt* in 1890 were 449 persons, who were either widows or daughters of the workmen in the foundries, and their wages amounted to \$10,758.

That phase of the plans for food supply that includes the boarding facilities for unmarried workmen remains yet to be described. Before doing so we would mention the hotel known as the "Essener Hof," which is run by the firm, but is intended for guests of Mr. Krupp, and especially for persons doing business with the firm. Only when not filled in this way is it at the service of the public. Its capacity is limited to twenty-five rooms, beside dining and reception rooms, billiard halls, etc. By special arrangement, however, the principal officers and directors of the works dine regularly here at reduced rates. The boarding establishment is known as the "Menage." It was started as far back as 1856 with 200 unmarried men; through the sixties it had an average of 500 men, and by 1873 the number had reached 1775, but sank again to less than 500 persons in 1875. At present it averages about 800 men. The fall in numbers was largely due to the desire on the part of the men for greater freedom than the supervision of the "Menage" allowed. In 1884, in the interest of the moral and physical welfare of the employés, it was made compulsory for all unmarried workmen, not living with relatives, upon entering the employ of the firm to become members of the "Menage." In the first years of the "Menage" the men received lodging, dinner, with meat four times a week, supper, butter, coffee and washing for fifteen cents per day. In 1862 the price was raised to seventeen cents per day, and in 1869 to eighteen cents, with meat every day for dinner. In 1874, on account of the high price of food, the charge went up to twenty cents, where it has remained since that time, with, however, constant improvement in the food given. At present the men receive meat or fish three evenings in the week, as well as at dinner, and are not limited in quantity eaten.

So much for the food supply. The methods by which the plans are carried out are all open to inspection, and no charges of advantage on the part of the firm, as is usual in the case of a company's stores, are made. All the employés



do not use the *Anstalt*, because the prize system and offers of credit have greater weight with the careless, unthinking, improvident element than the slight apparent difference in price. On the other hand the largest and best part of the employés are glad to deal where they receive an advantage and are not misled by misrepresentations of goods. The fact that over 11,000 books of account between the *Anstalt* and the employés are outstanding speaks for itself.

3. *The Treatment and Prevention of Sickness and Disease.*—Every care has been taken by the Krupp firm to have buildings so located and constructed that epidemics from inherent causes will be impossible. It was still necessary to provide for strict medical supervision. A board of physicians was formed whose sole duty is to look after the health of the employes and their families. The proper removal of all refuse matter and the condition of the drains in all buildings receive careful attention from this sanitary board. Two disinfecting machines are owned by the factory, and are used for disinfecting beds, clothes, etc., as well as houses. The process is elaborate and thorough in its effects. In the last fifteen years it has been used on the average eighty-three times a year.

It will be remembered that the death rate in the workingmen's quarter of the city of Essen before the Krupp buildings were constructed was over five per cent. In the past twenty-one years the highest death rate has been 1.7 per cent., and the lowest 0.8 per cent., and the average for the period only 1.23 per cent. This is an exceedingly favorable state of affairs when we consider that no country taken as a whole shows a lower death rate than 1.79 per cent., and that the average for the German Empire is nearly four per cent. This comparison, however, must be made with the fact in mind that we are dealing here with an average death rate among adults only. Unless accidents among the workmen are numerous such a death rate must always be far below that of a population including children, half of whom die before reaching the fifth year. The Krupp

figures should include statistics of the families of the employés. It is probable that these would show a very favorable comparison if such a record had been kept.

During the Franco-German war in 1870 Mr. Alfred Krupp erected a hospital where sick and wounded soldiers might be taken care of, and when this temporary necessity no longer existed, the firm in May, 1872, made the hospital permanent for the treatment of sick employés. In 1887-'88 two new departments for the use of women and children of the employés' families were erected, and in 1889-'90 the old buildings were largely rebuilt. The hospital is well located and consists of five wards in separate buildings constructed on the most improved plan. The grounds comprise four and a half acres of land, three-quarters of an acre being taken up with buildings, and the remainder laid out in gardens. The capacity is ample for the needs of the works. The men's wards have had an average of about fifty patients yearly for the last ten years; they can easily accommodate ninety. The appliances of the hospital compare favorably with other first-class German hospitals. From the opening of the hospital in May, 1872, to July, 1891, 14,134 cases have been treated. The total average cost per day per man treated has been varied, from thirty-eight to seventy-five cents. According to law all the men in the works must be insured against sickness, and this insurance association (also belonging to the works) pays the hospital fund as follows: For each day of treatment for men, thirty-eight cents; for women, thirty cents; for children, from twenty to twenty-five cents. While this to some extent covers the running expenses of the hospital, there is a large deficit each year, which is paid by the firm as a charity. As an additional prevention to the spread of epidemic diseases the firm has erected two lazarettos outside of the city, where severe contagious diseases are promptly treated with the least possible danger to the community.

Recognizing the importance of cleanliness as a preventive to all disease a large bathing establishment has been erected under the supervision of the physicians, and is so

arranged that steam baths can also be given when prescribed. The physicians have authority to order baths to be given to sick persons and charged to the account of the insurance association. The use of a bath tub for an ordinary bath costs two and a half cents; with towel, three and three-quarter cents; a steam bath costs twenty-five cents. Free baths are prescribed for certain workmen whose work may require the same, and the number of such baths given in 1890 was 6000. These figures do not include the bath tickets (in 1890, 8457) issued, at a cost of two and half cents each, at the city swimming bath house, which is the popular bath with the men during the summer months. Two additional bathing establishments have been erected at a cost of \$5000 and \$2500 respectively in the neighboring mining districts owned and operated by the Krupps. Both bath houses can be used free of charge by the miners and the families. It is the intention of the firm to increase the number of free bathing establishments throughout their mining settlements.

4. *The Establishment of Insurance, Pension and Relief Funds, Building Associations and Saving Banks.*—The insurance associations connected with the works are three in number—one for insurance against accident, one for life insurance, and one for insurance against sickness. They are operated under different rules and regulations, according as they apply to the officials or the workmen. The laws of the German Empire, as well as the stricter regulations of Prussia, require all workmen employed in factories, foundries and similar establishments to be insured against sickness and accidents; in the case of the former, at the joint cost of employer and employé in the proportion of one-third and two-thirds respectively, while in the case of the latter, the insurance is at the sole cost of the employer. In both cases the employer is responsible by law for the entering of the employé on the books of an insurance association under government control. Under the law of June 15, 1883, the combination of the various insurance funds and associations into one organization was forbidden. As early as 1853, the Krupps

had a fund for the payment of sick and death benefits, into which both the firm and the employ  s paid dues.\*

The membership varied from 1750 in 1856 to 18,715 in 1884, and the number of cases of sickness per member per year was lowest in 1860, when it averaged 1.33, and highest in 1865, when it was 2.59; the average for the whole period was about two cases per member per year.

To understand the change that took place January 1, 1885, and the firm's relation to the various insurance schemes started on or after that date, it is necessary to sum up the provisions of the three main insurance laws affecting the workmen of the German Empire, the Accident Insurance Law of July 7, 1884, the law for Insurance against sickness passed June 15, 1883, and the law of June, 1889, for Insurance against old age and incapacity for work.

The principal points of the Accident Insurance Law (*Unfallsversicherung*) are: (1) That it affects all laborers and officials employed in mines, factories, foundries, salt works, quarries, etc., and engaged in employments where masonry, carpentry and roofing is necessary, also, where steam, water, wind or gas-power machinery is used, whose yearly salary or wages do not exceed \$500. (2) For the persons included in the above-named employments the insurance is compulsory. (3) The insurance covers all accidents unless premeditated and grants reparation for the

\* TOTAL STATISTICS IN ROUND NUMBERS, OF BENEFIT FUND FOR THE PERIOD  
1856 TO 1884 (INC.).

The history of this fund up to January 1, 1885, when it was divided according to the provisions of the law of 1883, may be readily seen from a glance at the following table:

Dr.		Cr.	
Entrance fees,.....	\$24,000	Nursing, care of sick members,	\$164,000
Members' dues, .....	1,000,000	Sick benefits paid in cash,.....	450,000
The firm's dues,.....	500,000	Cost of medical treatment,.....	384,000
Fines, .....	36,000	Assistance in exceptional cases,	184,000
Accumulated interest,	145,000	Pensions, .....	90,000
Miscellaneous income,	10,000	Death benefits,.....	44,000
		Miscellaneous sums voted, .....	9,000
	\$1,715,000	Balance on hand, Jan. 1, 1885,....	390,000

\$1,715,000

same. (4) The reparation consists (*a*) in the payment of the physician's charges from the beginning of the fourteenth week of sickness, and continuing until the end of the same, and also during the same period, including the payment of a benefit fee amounting to sixty-six per cent. of the member's wages. The wages are reckoned on the basis of the past year's wages, or on the basis of the customary wages at the specified place, if they are higher for similar services. If the wages exceed one dollar per day, only a third of the amount in excess is counted. Up to the end of the thirteenth week the injured person is entitled to physician's charges and benefit fee from the funds of the Association for Insurance against sickness, and not from the Accident Insurance Association. (*b*) In case of death, in addition to the above, the cost of burial must be paid by the Accident Association, and the same must equal \$7.50 as a minimum, and be equal to twenty times a day's wages of the said person. The widow of the deceased must also receive up to her death or re-marriage a yearly benefit equal to twenty per cent. of the deceased's wages, and each child up to the fifteenth year, from fifteen to twenty per cent. of the same; widow and children combined cannot, however, receive more than sixty per cent. of the deceased's wages. Living ancestors, if dependent upon the deceased as sole provider, also receive amounts up to twenty per cent. of the deceased's wages. If the widow re-marries, she receives upon that occasion a sum equal to three times her yearly benefit, and then has no more claims. (5) The burden and cost of insurance fees, in so far as they are not for funds covering the first thirteen weeks of sickness, must be borne exclusively by the employer. (6) The insurance is taken by associations which must be organized in specified districts by the entrepreneurs under permission and control of the Bundesrath or Upper House of the German Empire. These associations are to be directed by boards representing the interests of both employer and employes. (7) A special Imperial Insurance Officer has the control and oversight of these associations. (8) No further

legal responsibility rests upon the employer for the persons who come under these insurance laws.

Supplementary laws in 1885-'86-'87 have not materially altered the above Accident Insurance Law, except to extend its scope and make it apply to additional trades and industries. About five million German workmen are insured under the provisions of the various laws.

The Law of 1883 for insurance against sickness requires only a word of explanation. It applies to nearly all classes of workmen who are employed for a week or more and receive wages. It requires them to be insured in one of six classes of associations to be formed according to the provisions of the law, according to localities, industries, groups of industries, etc. In case of sickness the insured receives medical treatment free of charge for thirteen weeks, and from the third day on, a benefit equal to half the customary day's wages at the place in question. The member's fees may equal two per cent. (usually one and a half per cent.) of his day's wages, of which one-third must be paid by the employer.

Mr. Krupp planned associations covered by the above laws, and in some cases going farther, and then secured the government's approval of his plans. The points in which his Insurance Fund for sickness offers advantages beyond the legal requirements are: (1) Members who have been employés of the works for five years can be paid the full cost of treatment for twenty-six weeks instead of thirteen. (2) Married men or widowers with children receive in addition to the legal sick benefit five per cent. of their wages for each child under fifteen years of age, provided, the whole benefit received does not exceed two-thirds of the respective member's wages, which also cannot be reckoned at more than one dollar per day. Sixteen physicians, among them two eye specialists, are employed by the fund. Ten of them are in Essen and the others at branch works. The members of the association have the privilege of choosing their physician from among the number, and can also, by paying a quarterly

fee of thirty cents, secure the medical services of the physician for their families without further costs. On several occasions this fund has received special gifts from the Krupps, and has a regular income from the same source of the five per cent. interest on a \$10,000 endowment. The membership of the association numbered, in 1890, 15,572.

The Accident Insurance Law was supplemented by the firm undertaking to insure at its own expense all officers having a yearly salary of over \$500, and all employés who, for any reasons whatsoever, do not come under the law of July 6, 1884. According to the terms of this special insurance, in case of death in consequence of an accident in the works, the family or relatives of the insured receive the insured's full wages for the month in which the death takes place, and for the two following months; thereafter a yearly benefit for the widow of twenty per cent., and for each child under fifteen years fifteen per cent. (combined not to exceed sixty per cent.) of the deceased's salary. In case of accident the insured receives full wages during the period of recovery, and after the same a benefit varying with his diminished capacity for work, but not to exceed two-thirds of his former wages.

A Life Insurance Association was formed in 1877, whose object was to assist and encourage the taking out of life insurance policies among the officers and men. Arrangements have been made with eight life insurance associations, whereby in most cases the society by direct communication receives the full or a part of the commission usually paid to agents. This association has an endowment from Mr. Krupp of about \$13,500, and is administered by officers of the firm without charge. Any employé of the works is eligible to membership by taking out a life insurance policy in one of the eight companies. The advantages of membership are:

- (1) The avoidance of all trouble in the payment of premiums, etc., which is looked after and paid through this society.
- (2) Saving of costs in taking out a policy through the society, that is, there is an exemption from entrance fees,

examination fees, etc. (3) The insured receives half of any commission that the association gets on new policies. (4) Members are also assisted in the payment of premiums, and in the tiding over of difficult periods when otherwise a policy might have to be given up. In 1890, the membership amounted in round numbers to 2000, with policies aggregating \$1,000,000.

Pensions for workmen in old age and for their widows and orphans were provided for in years preceding 1885 in connection with the common fund for sickness and accident. Since the separation of funds, which then took place, the pension question has become a more important one. As the pension funds now exist, they may be briefly summed up as follows: First, a pension fund for workmen receiving wages amounting to less than \$500 a year; secondly, a fund for officers and men receiving more than \$500 yearly.

The workmen's pension fund started with the capital received from the former fund for sick and death benefits and assumed the obligations of the same to pension the persons belonging to that fund. The members of the new fund pay an entrance fee equal to one and a half times their day's wages, provided the fee does not exceed \$1.50. The dues amount to one and three-tenths per cent. of the member's wages. Since January, 1891, Mr. Krupp pays each year into the fund an amount equal to the sum of the dues paid by the members; from 1885 to 1891 the firm paid yearly a sum equal to one-half the dues paid by members. A workman is entitled to a pension after twenty years of service at the works and membership in the pension fund, or after fifteen years of exceptionally hard work and incapacity for further work, to be determined by the firm and directors of the pension fund. The amount of the pension after twenty years of service is forty per cent. of the average wages or salary of the last three years before the receipt of a pension (provided this was not lower than formerly on account of incapacity for work) and is increased one and one-half per cent. for every year of service over twenty that the member



may have served. When wages or salary exceeds \$1.50 per day, the amount in excess is not reckoned; the daily wage-rate determined is then multiplied by 300 for the year's amount and the pension is paid on this basis. In case of death the widow of a member of the pension fund receives up to her death or re-marriage fifty per cent. of the pension which her husband would have received, and each child under fourteen years receives ten per cent. up to completion of the fourteenth year, or if the mother is not living, the children receive fifteen per cent. instead of ten, under the same conditions; the total amount received by the family, however, must not exceed seventy-five per cent. of the pension that the member received. The widow's pension is diminished one-half if she is more than twenty years younger than her deceased husband, or if her husband was over fifty-five years of age at the time of their marriage.

The law of the German Empire requiring certain classes of workmen to be insured against the incapacity of old age, or a broken down constitution (*Invaliditäts-und Altersversicherung*) was a supplementary act to the series of government measures for the protection of workmen. It was passed in June, 1889, not without much opposition and only through the energetic and determined efforts of Bismarck, but did not go into effect until January 1, 1891. It applies to all workmen and officials working for wages, or salary not exceeding \$500, and requires them to be insured either in private corporations under governmental supervision or in district associations to be organized under the provisions of the bill. The insured receives a benefit (1) Without respect to age when he meets with an accident, unpremeditated on his part, if he has paid fees in such an association 235 weeks (five years of forty-seven weeks each); (2) When he has reached his seventy-first year, provided he has paid fees for 1410 weeks (thirty years of forty-seven weeks each). The fees and benefits are in proportion to the wages of the respective members. Wage earners are divided into four classes (1) Wages up to \$87.50 a year; (2) Wages from \$87.50

to \$137.50; (3) Wages from \$137.50 to \$212.50; (4) Over \$212.50. The fees are for the first class three and one-half cents a week; second class, five cents; third class, six cents; fourth class, seven and a half cents per week. In addition to these fees the respective employers must pay an amount equal to one-half the fees paid by their employés. The benefit for invalids starts with a fixed amount for all of \$27.50, of which the German Empire pays \$12.50; the benefit is then increased according to the amount of assessment fees paid in by the respective individuals. Thus for each week of fees paid in the four classes the amount is increased one-half cent, one and one-half cents, two cents and three cents respectively; as a practical example, a man of the first class who had paid fees five years and became an invalid would receive a yearly benefit of \$28.68 ( $\$27.50 + 5 \times 47$  [paying weeks]  $\times .005$  [cents] = \$28.675) and the same if he had paid fees fifty years would receive \$39.25 ( $\$27.50 + 50 \times 47 \times .005$  = 39.75). The old age benefit on the other hand starts with \$12.50 as a basis for all classes, paid in full by the government, and then adds one cent, one and one-half cents, two cents, two and one-half cents for the four classes respectively for each week of dues paid. Thus, a man of the first class who had attained the required age of seventy-one would receive a yearly benefit of \$26.10; of the second class, \$33.65; of the third class, \$40.70; of the fourth class, \$47.75 ( $\$12.50 + 1410$  [weeks]  $\times .025$  = \$47.75).

The respective laws conflicted with the special funds and extra provisions made at the Krupp Works so as to place a sort of premium on old age, incapacity, etc. It became necessary to insert the provision in the pension rules that whenever through rights in several of these funds, an employé should receive a total sum more than seventy-five per cent. of his former wages as a pension, the separate amounts should be proportionately cut down so that the sum would equal that amount. The total sum paid by the Krupps for pension purposes is \$60,000 a year, of which \$2500 is paid under the provisions of the Imperial Insurance Law just mentioned.

Under all the foregoing provisions, officials and men with salaries of *over* \$500 a year are not provided for under pension laws and regulations. The Krupps, therefore, established in June, 1890, a pension fund for officers and endowed the same with a gift of \$125,000. All employ  s of the works with salaries over \$500 and under \$2500 are eligible to membership.

Two other funds, partially of a pension character, were established by Mr. F. A. Krupp upon the death of his father in 1887, and are deserving of mention. One was a gift of \$250,000, the interest of which is to be administered and used by the directors of the other pension funds for the benefit of those who may need pensions, but through some technicalities may not be entitled to them through the regular channels, and secondly, for those whose regular pensions may not be sufficient to prevent want and suffering. The other was a gift of \$125,000 to the city of Essen, to be managed by a board of nine appointed by the mayor of the city, but to include four persons named by the owner of the Krupp Works. The interest of this fund is intended to be used for the material and moral improvement of the lower classes in Essen and at present is being devoted to building workingmen's dwellings, that being considered the most pressing necessity.

The building association idea was put in practice in 1889, when Mr. Krupp laid aside a capital of \$125,000 to be used to encourage employ  s to build their own homes. This capital is loaned under certain conditions, at a moderate rate of interest, to those who desire to build homes. It is arranged so that the amounts borrowed can be paid back on the amortization plan in small monthly payments, and so that the total burden to the owner of the house will not be much greater than paying rent, and yet after a series of years he can own his home without incumbrance. The conditions for receiving such a loan are as follows:—(1.) The applicant must be earning a yearly wage of at least \$750; (2.) He must have been employed in the service of the

foundry at least three years, and have a good record during that period ; (3.) He must be married, and between twenty-five and fifty years of age ; (4.) He must have served his first term of military service or be free from the same ; (5.) He must be able to pay upon the house or ground at least \$75.00 of his own money. The security taken is in the form of a first mortgage on ground and house. The rate of interest is three per cent., and the monthly payments so graded that the capital loaned will be paid back in twenty-five years. The full capital can be paid off by the borrower or be demanded by the firm on three months' notice ; the firm, however, has expressly declared that it will make no use of this privilege on its part except in cases of absolute necessity or insolvency. The full capital is, however, due and to be paid whenever the house passes into the hands of another person or the borrower leaves the service of the firm of his own free will within the first ten years after the loan has been made. In the two years, 1889-'91, over seventy-five houses, in value from \$250 to \$3350, have been built upon this basis.

All that has been done in the line of savings banks and in the encouraging of saving, apart from efforts among school children, can be summed up in few words. First, the firm will take deposits which amount to at least \$50.00 a month, and pay five per cent. interest on the same ; secondly, the stamps (2½ cents in value) of the City Saving Fund are for sale at all the shops of the co-operative stores ; cards with thirty blank spaces are furnished free, and when filled with stamps are received at these shops and exchanged at the Saving Bank for book accounts. This is simply a matter of convenience to bring the business of the City Saving Fund constantly to the attention of all the employés throughout the colonies.

With this summary of the efforts made by the Krupps, looking to the material welfare of their employés, we will glance briefly at those efforts along another line—that is, the training of the mental and moral life of their army of laborers.

## (B) EDUCATIONAL WORK AT ESSEN.

In order to raise the standard of family life and to maintain efficiency and contentment among the employes, something more was needed than cheap, sanitary dwellings, and Mr. Krupp soon gave careful consideration to plans for educational advantages, especially for the children, and to schemes for providing amusement and recreation. It is not our purpose in this paper to discuss these plans fully, but rather for the sake of completeness to give a brief enumeration and summary of what has been done.

1. *The Firm's Common and Industrial Schools.*—The firm, owing to the overcrowding of the district schools, established private common schools, and now the larger part of the children in all the colonies receive their education in the firm's schools. There is a boys' and a girls' school, each with eight grades, with nineteen teachers in all. Half of them are Catholics and half Protestants. Instruction is free, and the entire cost of buildings, salaries, and administration, together with a school library and a botanical garden, is paid by the firm. In April, 1877, the school opened with 361 pupils, of whom seventy-five per cent. were Evangelical and twenty-five per cent. Catholics. In 1890 the total number was 1100.

The advanced schools in Essen and in Altendorf are partially supported by, and are, by special arrangement, open free to apprentices of the works. That in Altendorf has seven general evening classes and seven classes in drawing, with a total of twenty-two teachers and 300 pupils; and that in Essen has twenty-one classes, with forty-five teachers and 900 pupils. The instruction is elective, and courses in drawing, German, French, natural sciences, mathematics, mechanics, history, etc., are offered. A yearly school fee of \$1.50 is charged in Altendorf, and of \$4.50 in Essen. Over six hundred of the pupils in these schools belong to families connected with the Krupp works.

The industrial schools are divided into two classes—one for women and girls over fourteen years, and the other for

children. The first was started in 1875, and aims to fit women in all forms and branches of sewing and needlework, not only for the purposes of the home, but also to qualify them to earn a living. The courses are principally for persons connected with the families of the Krupp workmen, but small fees are charged as much as a proof of earnestness on the part of the pupils as to help pay the cost of maintaining the instruction. In 1890 there was an average of 186 pupils taking this work, about half of whom were in the sewing courses.

The industrial schools for children, three in number, are located in the different colonies. Here instruction in sewing, knitting and crocheting are given at hours that do not conflict with the regular daily schools. In 1890 over 2000 children received instruction in these schools, sixty-two per cent. of them in sewing, thirty per cent. in crocheting and eight per cent. in knitting. A fee of five cents a month is charged, but if a pupil remains fifteen months the full amount paid, seventy-five cents, is placed to the child's credit in the savings fund.

2. *Education of Apprentices and Girls in Housekeeping.*—The education of apprentices has received particular attention on the part of the firm, and has been especially remunerative in that some of the most capable men in the employ of the works have come from these ranks. In 1864 the firm had fifty-four apprentices, and in 1891 361, of whom the greater number were learning locksmithing, turning, theories of construction, masonry and carpentry. A contract in writing is made with each apprentice for four years, and he is then placed under the personal supervision of a higher official. Places as apprentices here are eagerly sought for, and applicants must have a certain measure of preliminary training. He must, while apprentice, take courses in the higher schools which are prescribed for him by his chief, so that on completing his term he has some theoretical knowledge of his specialty together with a thorough practical knowledge of the same, and a fair knowledge of at least

one trade kindred to his own. The apprentice does not pay anything for instruction, and, contrary to the rule in Germany, he receives small wages, varying from eighteen cents to sixty-three cents per day, according to efficiency. Half of these wages are not paid, except in cases of great need, until the end of the apprenticeship. In this way the apprentice has a little sum to begin on when starting for himself. The 103 apprentices who finished their course in 1890 received amounts varying from \$25 to \$310 and aggregating \$16,000, or on the average \$150 each. The value of the training that the apprentices receive compared with training elsewhere is highly prized by the older workmen, who make every effort to get these places for their sons.

A somewhat more exceptional institution of the same general character as that for the education of apprentices is the housekeeping school, where girls are thoroughly trained in everything that will make them practical wives and housekeepers. Twelve pupils are taken every two months and are kept for a four months' course. Thus the school has always twenty-four pupils. Instruction is given in the preparing of meals, in neatness and thrift, in the planning and keeping of provisions, in washing, darning and mending clothes, and in all forms of housework. The instruction is free, but a fee of \$1.50 a month is charged to help pay for the cost of boarding the pupil. The pupils of this school cook and prepare dinners each day for a number of widowers and their children, who have no one to supply the same, and also meals at low prices in special cases when ordered for workmen whose wives may be sick, and for invalids and widows not able to cook for themselves. In this way the material used in the cooking school is well utilized, and often the cost partially covered.

3. *Humanitarian rules in factory work and assistance given for the maintenance of religious instruction and for charity work.*—On Sundays and legal holidays no work is done at the foundries except it be necessary repairs to machinery, furnaces, etc. Catholic employés have an hour's leave of

absence on their special church days in order to attend early morning mass. The length of the working day is from 6 a. m. to 6 p. m., with three different intervals of rest aggregating a minimum of two hours per day. Night and day work is so arranged that it is equally divided among all; the length of time for night work is from 6 p. m. to 4½ a. m., with a half-hour pause. Excluding pauses, therefore, the actual working time is ten hours a day; formerly it was eleven and one-half hours per day, and, including pauses, thirteen hours. Only since February, 1890, has work ceased at 6 p. m. instead of 7 p. m. Extra hours for repairs, etc., were formerly much more frequent than at present, but yet in 1890-'91 they were numerous enough to average one per day for each workman. Lateness in arriving at work is punished by a fine, and promptness, to the extent of only one lateness in a year, is rewarded by a small money payment added to the wages at the end of the year. About thirty-four per cent. of the employés are entitled to this reward each year. Women and children are not employed in the works. Two large eating halls with gardens have been constructed for the use of those men who find it too far to go home to dinner, or who may prefer to eat the dinner they bring at the works. At different places throughout the works coffee and rolls can be secured in the morning from five to six and a half o'clock, and in the afternoons from five and a half to seven, at nominal prices. In hot weather cold coffee and drinking water are given to the furnace laborers throughout the day. During the entire year certain classes of workmen such as smelters, hammersmiths, etc., whose work is exceedingly heavy and taxing, receive daily a gill of light rye whisky. During the year 1890-'91 the cost of furnishing coffee and whisky in this way was \$7500. A large quantity of articles and clothes of various kinds for the protection of the men while at work, such as leather gloves, coats, waterproof coats, eye protectors, etc., in value to the amount of \$17,000, were given out during the same year. Every protection possible to guard against accidents



from machinery has been made irrespective of cost. Regular subscriptions of money, ground and building materials for both the Catholic and Evangelical churches have been made on the part of the firm. The religious teaching, however, is left completely in the hands of the Catholic and Protestant clergymen, the salaries of several being paid by the Krupp firm. For the care of the sick, Evangelical and Catholic sisters have been supported, and workmen's associations, libraries, kindergarten schools and various other forms of work affecting the laboring people have been done, in part, or at the sole cost of the firm, which has publicly announced itself willing to materially assist any and every practicable movement and effort on the part of third parties to improve the moral, physical and intellectual condition of their employés.

In conclusion, we desire to repeat the statement that Mr. Krupp has devised and maintained the projects above described not merely, nor even for the most part, as a philanthropic movement. He does not consider the money that he has laid out in this way, with the exception, perhaps, of a few side issues, as in any sense a charity, but as a part of the running cost of his establishment, and a part that has brought him in as large a return in money as any other. In a large industrial establishment like the Krupp Steel Works, where a world-wide reputation has been won for a certain quality of work, it is of the utmost importance that a steady, contented body of workmen, the *personnel* of which changes as little as possible, be employed. Add to these general conditions the fact that an ever-increasing number of men are needed, and that there are certain business secrets to be guarded, and the imperative necessity of social work at Essen is at once evident. The Krupp firm considers that it has been able, through its social work, to so fully centre the interests of its employés in the neighborhood in which they live, and so unite them with the interests of the firm, that they have exhibited less desire to change employment, have been less affected by labor disturbances in other parts of the

country, and have been held at lower wages than would have otherwise been possible. Herein consist the advantages and the money return.

It is not our purpose here to examine into these results from the standpoint of the Krupp firm, nor would such examination have much value for conditions in other countries. We have attempted merely a description of the various plans in operation at Essen, and if this has been satisfactorily given, the adoption or advocacy of similar efforts under the entirely different economic and industrial conditions in America must be considered solely on the basis of American experience. These efforts on German soil and under German conditions can only have an historical interest for the student of labor movements in general, and can, at most, only be of suggestive value to the practical employer of labor in America.

SAMUEL M. LINDSAY.

*Berlin.*